Figure 1

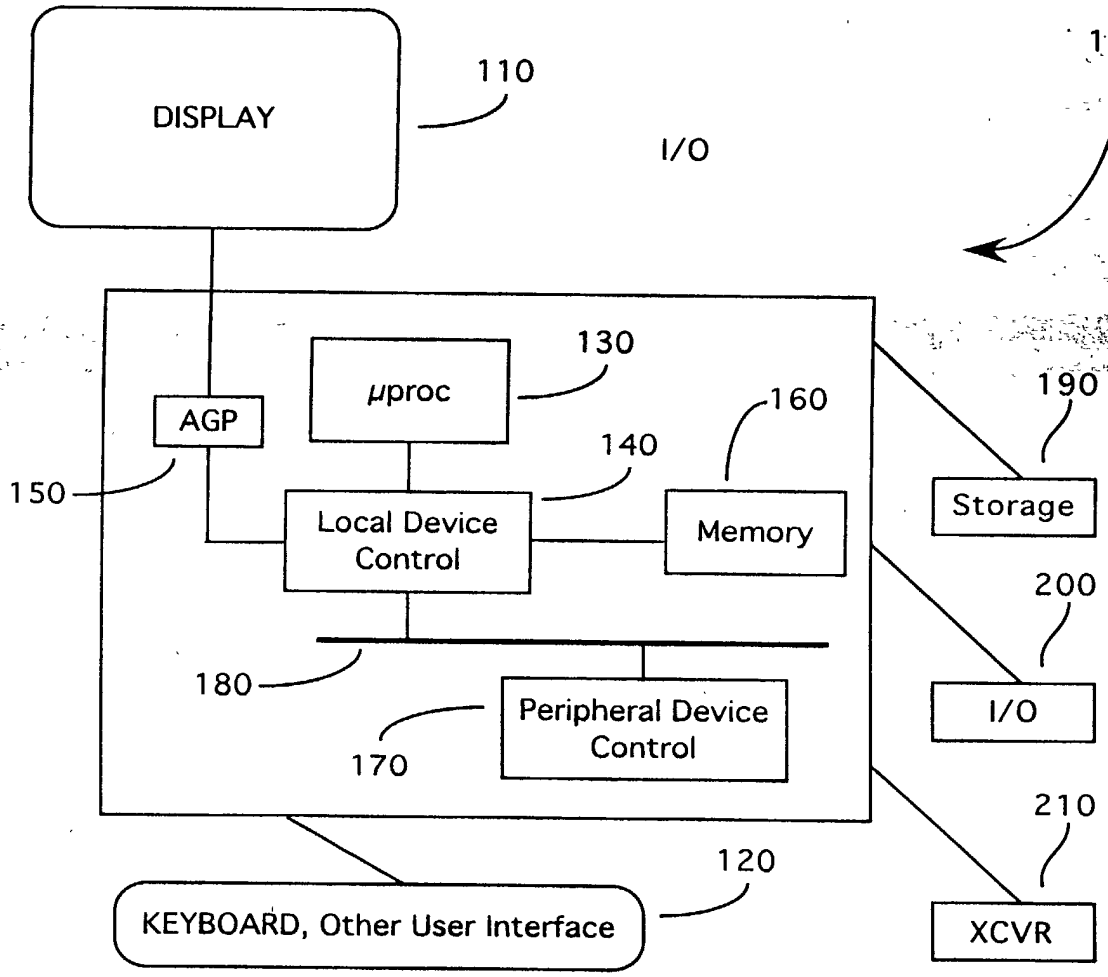
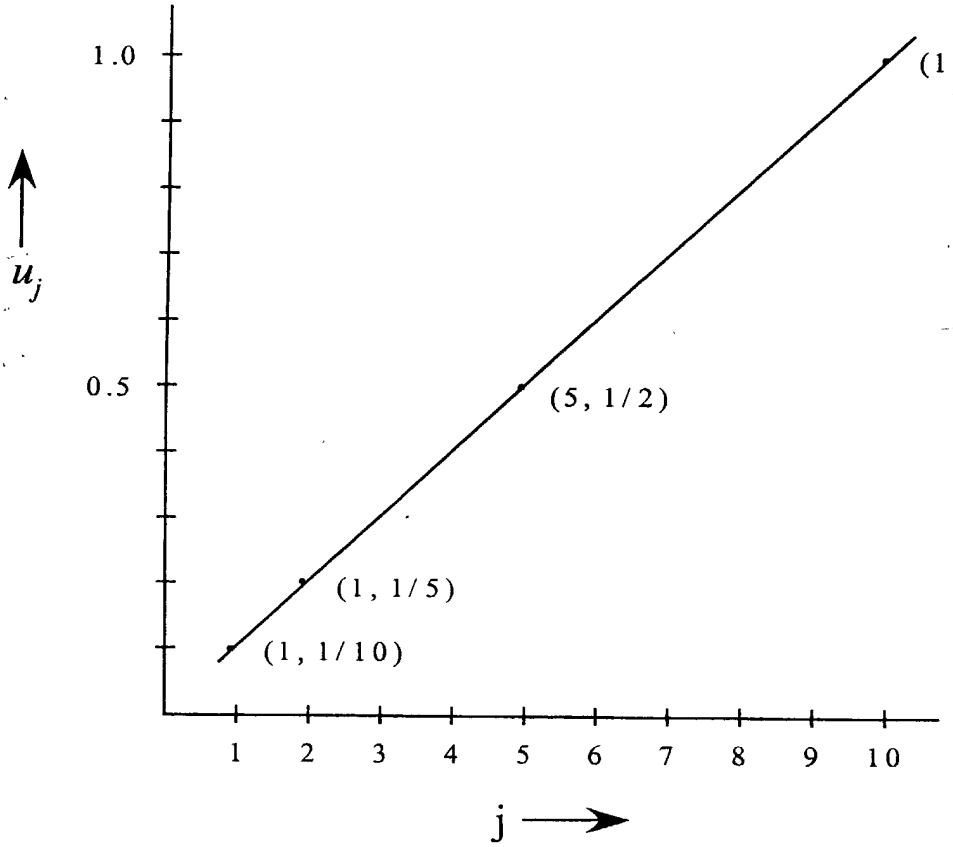

DISPLAY
110
100
I/O
µproc
130
AGP
160
190
140
150
Local Device Control
Memory
Storage
200
180
Peripheral Device Control
I/O
170
210
120
KEYBOARD, Other User Interface
XCVR

Figure 2



Example 1: N = 10 and
$u_j = j/10$ (j = 1, 2, ..., 10)

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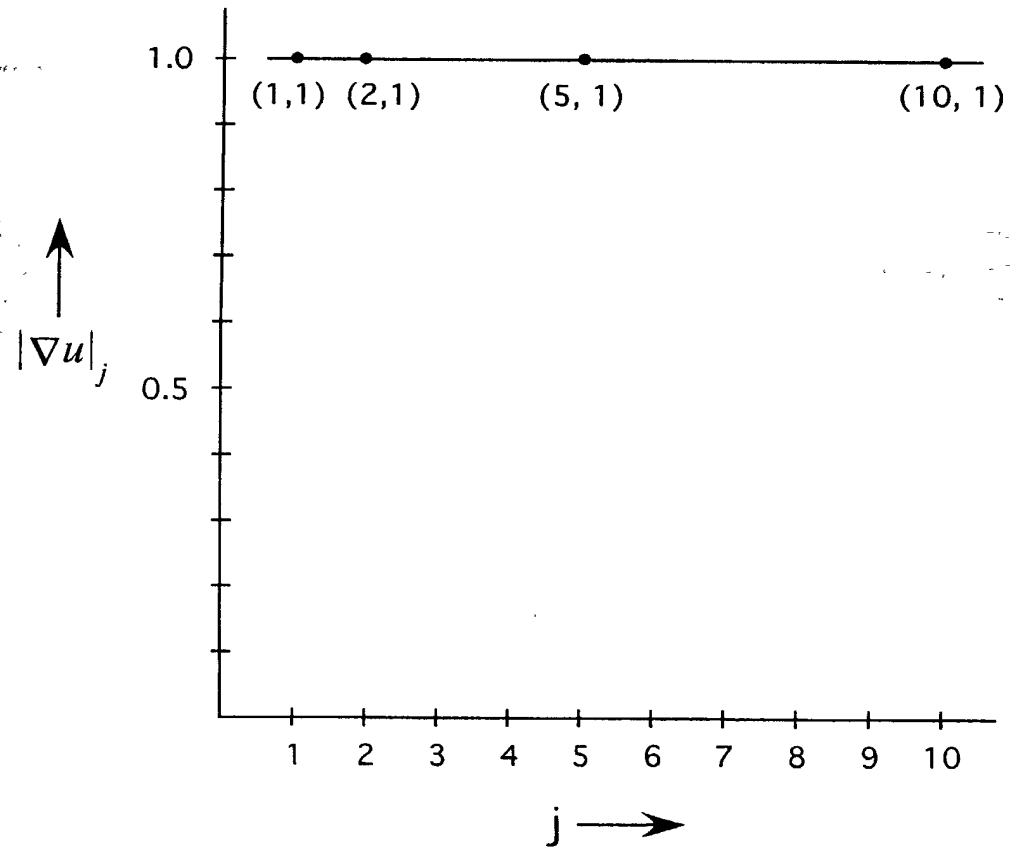
Figure 3



Example 1: N = 10 and
$|\nabla u|_j = 1$ (j = 1, 2, ..., 10)

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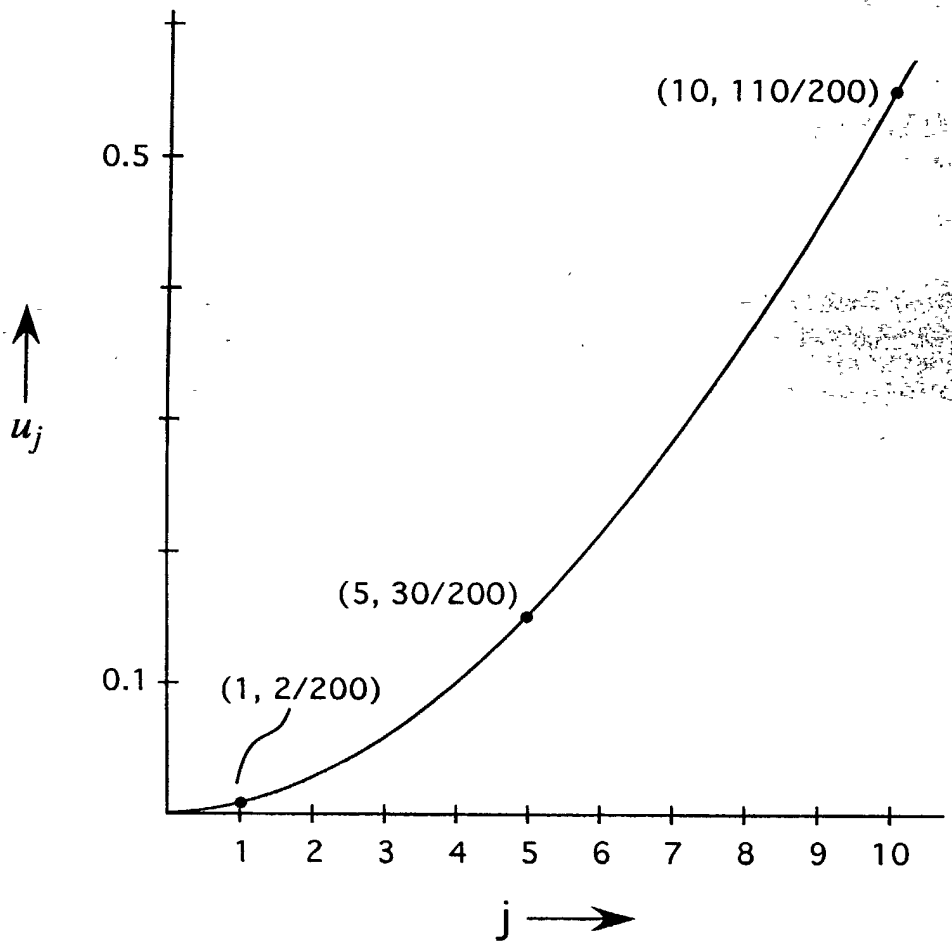
Figure 4



Example 2: N = 10 and
$u_j = j\,(j+1)/200$
$(j = 1, 2, \ldots, 10)$

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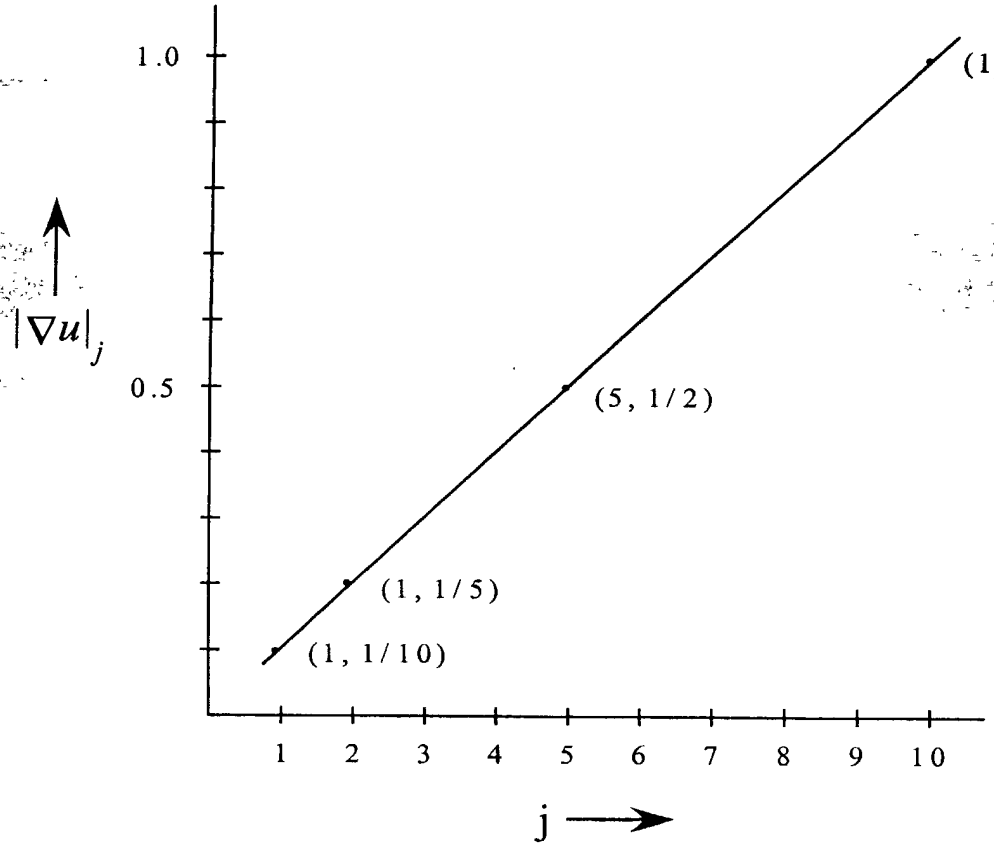
Figure 5



Example 2: N = 10 and
$|\nabla u|_j = 1$ (j = 1, 2, ..., 10)

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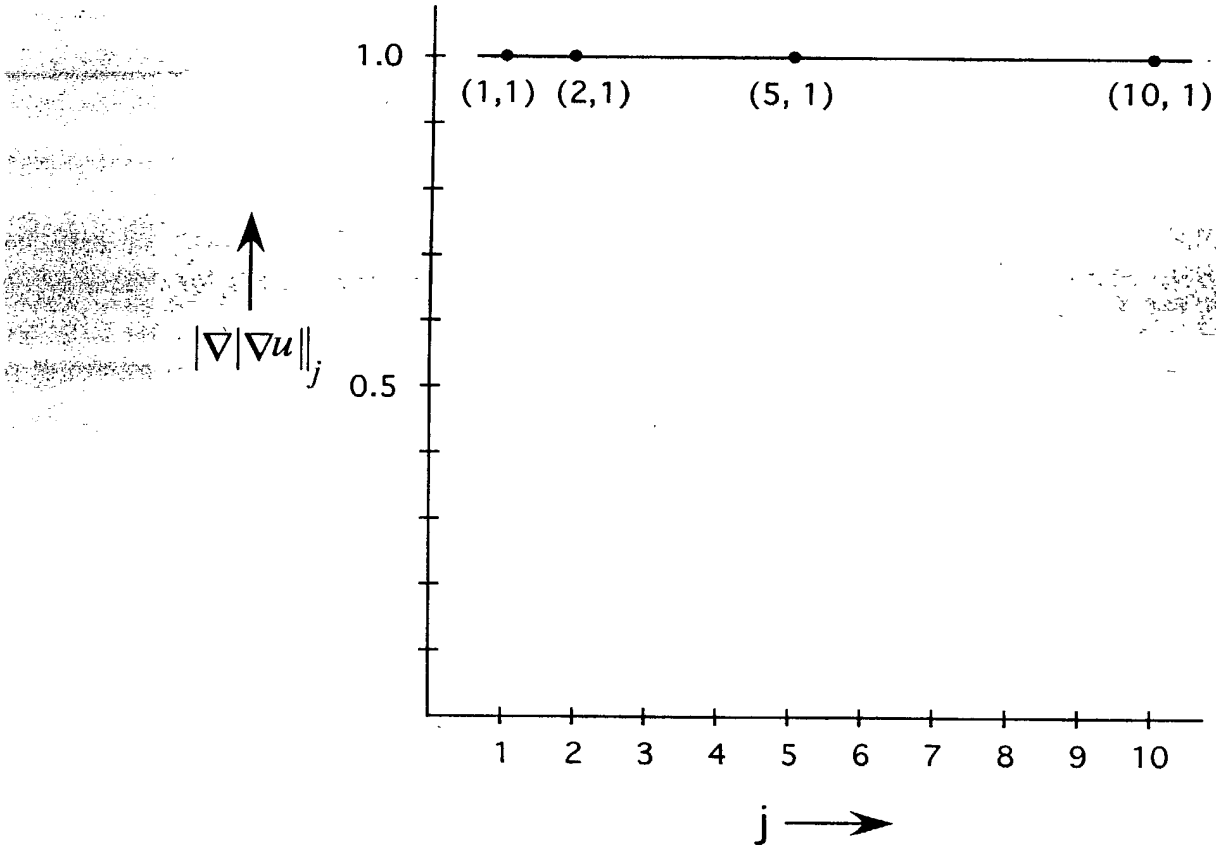
Figure 6



Example2: N = 10 and

$|\nabla|\nabla u\|_j = 1$ (j = 1, 2, ..., 10)

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Figure 7

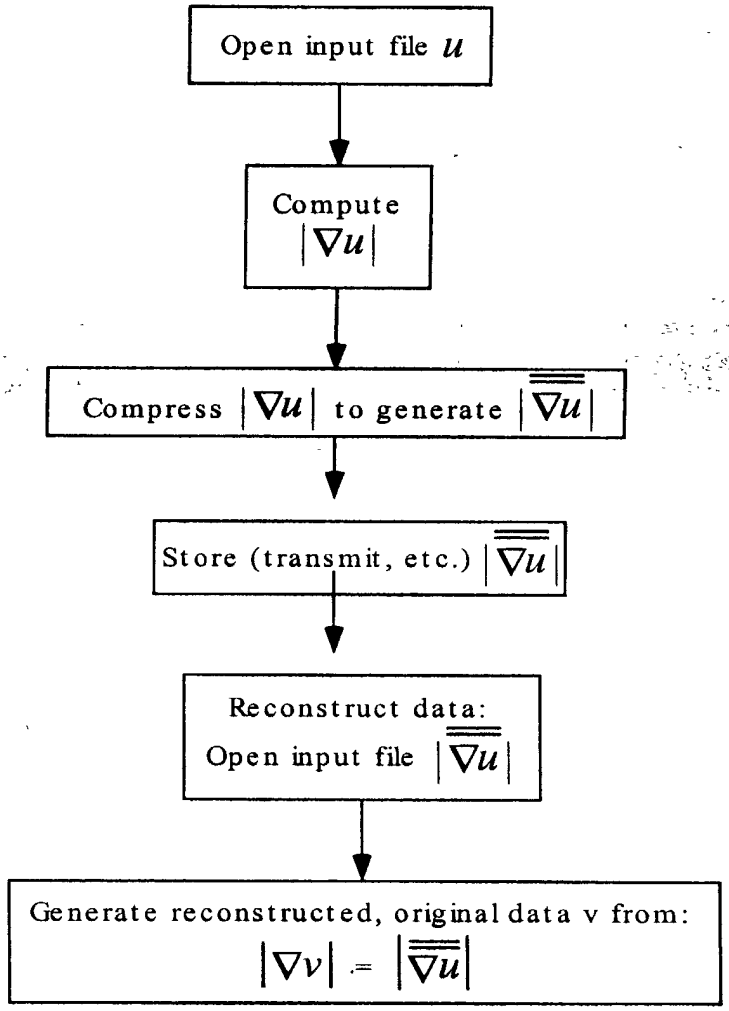
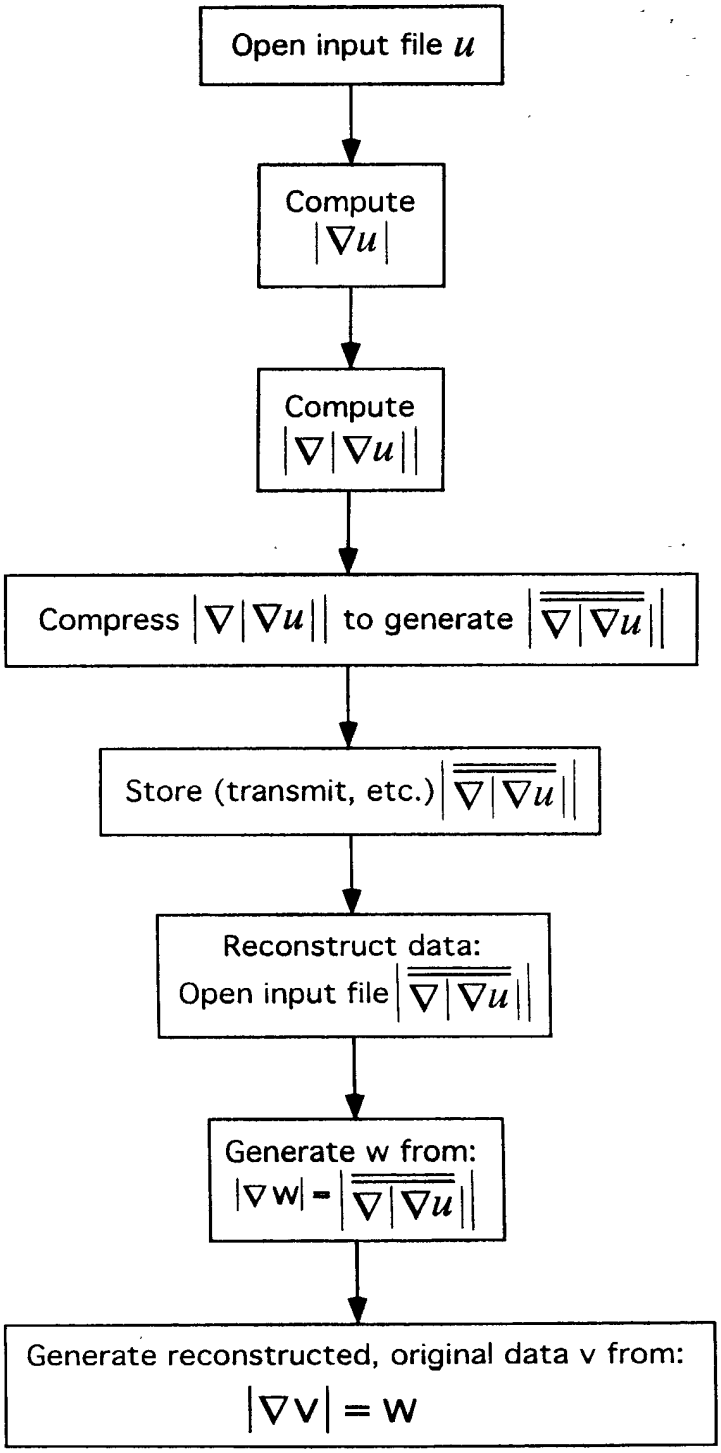


Figure 8


Open input file u
Compute $|\nabla u|$
Compute $|\nabla|\nabla u||$
Compress $|\nabla|\nabla u||$ to generate $|\overline{\overline{\nabla|\nabla u|}}|$
Store (transmit, etc.) $|\overline{\overline{\nabla|\nabla u|}}|$
Reconstruct data: Open input file $|\overline{\overline{\nabla|\nabla u|}}|$
Generate w from: $|\nabla w| = |\overline{\overline{\nabla|\nabla u|}}|$
Generate reconstructed, original data v from: $|\nabla v| = w$